

## ABSTRACT

Planar devices incorporating electrodes for performing chemical analyses are disclosed. The devices include an electrode module in a fluidic housing. The electrode module includes a carrier module and at least one electrode thereon. More specifically, the electrode module includes a planar carrier module made of a laminate of a metal layer and an insulator layer, which metal layer is divided into at least two metal conductor elements; and at least one electrode formed directly on the carrier module and including a membrane element for imparting chemical sensitivity to the electrode, the membrane element being applied to the insulator layer to be in electrical contact with one of the metal conductor elements through the insulator layer. The insulator layer preferably has die cut perforations through which the membrane element extends into electrical contact with the conductor layer. In the most economical embodiment, the carrier module is a common chip carrier according to ISO 7816-2. The devices of cheaper construction than prior art chemical analysis chips, especially since they are of much simplified construction and of standardized format which allows the use of readily available low cost components.